

CLAIMS

1. Cell culture medium composition containing:
 - (i) serum and/or serum fraction of human origin and/or of animal origin
 - 5 (ii) insulin or a derivative of the latter
 - (iii) one or more compound(s) chosen from the class of antioxidants and/or vitamins.
2. Composition according to claim 1, in which human serum is used.
- 10 3. Composition according to claim 1, in which bovine serum is used.
4. Composition according to claim 1, comprising moreover one or more compound(s) chosen from the class of FGF-type growth factors.
- 15 5. Composition according to the preceding claim, in which the class of FGF-type growth factors is composed of bFGF, FGF-2 to FGF-10.
6. Composition according to one of the preceding claims, in which the
20 insulin derivative is chosen from the class of the IGFs, and vanadate-type insulomimetics.
7. Composition according to any one of claims 1-2 and 4-6, in which the human serum concentration is less than 5% by volume, preferably between 1% and
25 3%.
8. Composition according to one of the preceding claims, which moreover comprises a glucocorticoid.
- 30 9. Composition according to any one of the preceding claims, said vitamin being ascorbic acid.
10. Composition according to any one of the preceding claims, said antioxidant being N-acetyl-cysteine and/or selenium.
- 35 11. Composition according to any one of the preceding claims, which moreover comprises lipophosphatidic acid and/or one or more compound(s) of the classes of the EGFs, heregulins, thrombin, PDGF, thyroid hormones and LIF.

12. Process for the culture of progenitor and/or stem cells, in which the composition according to one of the preceding claims is used as culture medium during the cell amplification step.

5 13. Process according to the preceding claim, in which a cell differentiation step is carried out before, during or after said cell amplification step.

14. Process according to claim 12 or 13, in which the human serum used is autologous with the progenitor/stem cells.

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15. Process for producing myoblasts by implementation of the process according to one of claims 12 to 14.

16. Process for producing myoblasts according to the preceding claim, in
15 which the progenitor and/or stem cells are obtained by a step of cell extraction from muscle tissues.

17. Process for producing myoblasts according to the preceding claim, said extraction step being carried out by enzymatic digestion.

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18. Process for producing myoblasts according to one of claims 15 to 17, in which a harvesting and a separation of the cells obtained is carried out.

19. Process for producing myoblasts according to the preceding claim, in
25 which said step of harvesting and separation of the cells is carried out by enzymatic digestion followed by centrifugation and/or filtration.

20. Process for producing myoblasts according to one of the claims 15 to 19, in which a functionality test is carried out on the suitability of the myoblasts for
30 forming colonies.

21. Process for producing myoblasts according to one of claims 15 to 20 in which a characterization step is moreover carried out.

35 22. Process for producing myoblasts according to the preceding claim, in which cell cycle markers are used.

23. Process for producing myoblasts according to one of claims 15 to 22, in which a step of freezing of the myoblasts is carried out.

24. Cell population containing progenitor and/or stem cells and/or myoblasts in the culture medium according to one of claims 1 to 11.

25. Use of the myoblasts according to one of claims 15 to 23, said product being intended for cell therapy.

26. Use of the myoblasts according to the preceding claim for the preparation of a product intended for the functional treatment of the small muscles.

27. Use of the myoblasts according to claim 25 for the preparation of a product intended for the treatment of urinary incontinence.

28. Use of the myoblasts according to one of claims 15 to 23, said product being intended for gene therapy.

29. Use of the myoblasts by the process obtained according to one of claims 15 to 23 in toxicological and/or pharmacological screening.

30. Use of the myoblasts according to the preceding claim for detecting one or more substance(s) involved in rhabdomyolysis.